Legislative Audit Division

State of Montana

Report to the Legislature

February 1996

Limited Scope Performance Audit

Vehicle Fleet Management

This report contains information pertaining to the management of the state of Montana's vehicle fleet. We recommend the Department of Administration work with state agencies to develop and distribute "best practices" for vehicle management.

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PERFORMANCE AUDITS

Performance audits conducted by the Legislative Audit Division are designed to assess state government operations. From the audit work, a determination is made as to whether agencies and programs are accomplishing their purposes, and whether they can do so with greater efficiency and economy. In performing the audit work, the audit staff uses audit standards set forth by the United States General Accounting Office.

Members of the performance audit staff hold degrees in disciplines appropriate to the audit process. Areas of expertise include business and public administration, statistics, economics, computer science, communications, and engineering.

Performance audits are performed at the request of the Legislative Audit Committee which is a bicameral and bipartisan standing committee of the Montana Legislature. The committee consists of six members of the Senate and six members of the House of Representatives.

Legislative Audit Division

Limited Scope Performance Audit

Vehicle Fleet Management

Audit staff involved in this audit was Mary Zednick.

Table of Contents

Table of Contents

List of Tables

Appointed and Administrative Officials

Department of Administration	Lois Menzies, Director

Report Summary

Introduction

The state owns or leases over 3,000 vehicles of one ton or less located throughout the state. The vehicles are managed by 47 state entities. The intent of the audit was to use the practices of the state agencies themselves to help develop a set of "best practices" for vehicle use, care and maintenance. These practices could then be used by all agencies to manage their fleets. Audit results show the state has a varied approach to vehicle use and care based on decisions made by individual employees. The practices are so individually-based, the state is not fully realizing any efficiency from communication of "best practices."

Optimal Vehicle Management

We identified five basic components of an optimal Vehicle Management System:

Procurement - needs assessments, replacement, and purchasing.

Use and control - definitions of legitimate vehicle use, data records for usage (dates, mileage, purpose), vehicle utilization, and actual operating costs (fuel, oil, routine maintenance, and emergency repairs).

Maintenance - maintaining cumulative operational and repair cost records for each vehicle, and adherence to a preventive maintenance program.

Disposal - criteria to follow when disposing of vehicles.

Inventory - maintenance of data records for each vehicle by type, serial number, initial cost and location, and conducting, reconciling, and documenting an annual internal inventory of the vehicle fleet.

We reviewed vehicle management practices in six state agencies and two university units and found most state entities visited did not have written policies and procedures concerning the five basic components. The individualized vehicle management style has led to some inconsistencies and inefficiencies. For example:

-- Most agencies do not conduct formal needs analyses to determine if a vehicle is needed to meet the organization's mission or objectives.

-- Vehicles have been replaced shortly after money is spent repairing them.

-- New vehicles are purchased when a used vehicle or short-term lease could possibly meet the program's needs.

-- Personal vehicles are used in some agencies because there are no written policies as to who can use vehicles and for what purpose.

-- Data records are not always maintained so vehicle usage cannot be determined.

-- Few utilization reviews are conducted to determine how much vehicles are used or if they are used efficiently.

-- Most agencies do not track operating, maintenance, and repair costs.

-- Preventive maintenance programs vary within agencies.

-- Vehicles are not disposed of when they are no longer operable and insurance is still paid on them.

The state needs policies or guidelines pertaining to vehicle management to alleviate the inconsistencies and inefficiencies found in the audit. In most of the agencies we visited the person overseeing the vehicles was not hired for that duty. For example, vehicle management became part of the duties of a purchasing agent and a division administrator. A "manual of best vehicle management practices" would help these and other agency staff determine the most appropriate methods to efficiently manage agency-owned vehicles.

We believe the Department of Administration (DofA) should work with other agencies to develop "best practices" for vehicle management. DofA could use the existing expertise at the Departments of Transportation and Fish, Wildlife and Parks to help formulate appropriate guidelines. These guidelines could then be distributed to vehicle/fleet managers in state agencies.

Chapter I - Introduction

Introduction

A limited scope performance audit of state agency management of motor vehicles was conducted as a result of a Department of Transportation (DOT) Motor Pool audit (91P-28) issued in June 1992. The DOT audit identified approximately 3,800 vehicles (passenger, bus, truck, all-terrain, etc.) which are owned and operated by other state agencies and not subject to Motor Pool policies.

Audit Objectives

The objectives of this limited scope audit were to determine if state agencies have vehicle management systems in place and, if so, the systems' efficiency and effectiveness.

We focused on these objectives by answering the following questions:

1. How much does the state invest in the purchase and maintenance of state vehicles?
2. How does the state manage its fleets?
3. Does the state have and/or need criteria for managing its vehicle assets? Could these criteria be used by all agencies to help manage their fleets?
4. Are there effective and consistent guidelines addressing needs analysis, purchasing, maintenance, use, replacement, disposal, inventory records, data records for use, and tracking operating, maintenance and repair costs?
5. Are there alternatives to the current process for managing vehicle use?

Audit Scope and Methodology

The audit concentrated on vehicles of one ton or less owned or leased by state agencies. The audit was conducted in accordance with government auditing standards for performance audits.

A questionnaire was sent to all state agencies and university units to determine the number and types of vehicles owned or leased by state agencies. Motorcycles were included in the inventory, but

not snowmobiles or all-terrain vehicles. Questionnaire results were summarized and audit scope was established.

Agency Vehicles Included in Review

Based on questionnaire results, vehicle management systems were reviewed in six state agencies and two university units. Agencies were picked for review based upon the number of vehicles located in Helena and in other cities/towns. The six agencies audited owned a total of 994 vehicles of one ton or less. University units were chosen based on the number of vehicles owned or leased. There were a total of 370 vehicles at the two units selected.

Since we were conducting a follow-up audit (94SP-45 issued in March 1995) of the 1992 Equipment and Motor Pool Programs at the time of this audit, we did not include DOT in our review of agencies other than to obtain a vehicle inventory. We excluded Department of Justice Highway Patrol vehicles and Office of Public Instruction training vehicles from our review since they have specialized uses.

The state agencies we visited did not lease vehicles from private vendors. The two university units we visited indicated they leased vehicles, but upon review we noted the vehicles were donated by private vendors or obtained through federal or private grants. Universities have 79 of these vehicles, none of which we reviewed. Sixty-four vehicles leased by various agencies from DOT were not included since those vehicles are managed by DOT and were reviewed in our follow-up audit.

Methodology

Our review consisted of examining documentation and interviewing staff. We gathered usage, maintenance, and operating cost data from records maintained at the agencies. With this information we determined vehicle utilization, vehicle maintenance costs and frequency of maintenance, and total operating costs for each vehicle. We interviewed agency personal to determine disposal, purchasing, inventory, and maintenance policies. Any policies and procedures concerning the management of an agency's fleet were obtained.

Reports from other states were used to identify other fleet management systems for state-owned vehicles. We also reviewed texts, periodicals, and other articles to identify criteria for managing vehicle fleets of various sizes. We contacted national fleet management organizations to determine the optimum fleet management system.

Rental/leasing cost information was obtained from five private companies which lease vehicles. The dollar difference between using a Motor Pool vehicle and a privately-leased vehicle for some trips was calculated.

Management Memorandums

To make our work timely and responsive to the agencies we visited, we sent management memoranda to each agency. These memos included recommendations pertaining to:

- Vehicle utilization.
- Maintaining repair and cost records.
- Completion of usage records.
- Disposal policies.
- Conducting needs analysis to determine if an additional vehicle is needed, or if an existing vehicle should be replaced.

In addition, during the course of this audit we sent a management memorandum to the Department of Administration discussing two issues. These issues involved:

- The way agencies purchase vehicles. DofA is the agency responsible for state purchasing. The state can purchase vehicles from the federal government through General Services Administration (GSA) auctions. We recommended the department assign a "central" person to purchase vehicles from GSA auctions if more than one agency plans to purchase vehicles at the auction.

- Term contracts for oil changes. In March 1994 approximately 900 vehicles in 12 towns throughout the state were serviced by private vendors. The cost of an oil change and lubrication ranged from $20 to $40 depending on the vendor. We recommended DofA explore entering into multi-vendor term contracts in various cities throughout Montana for oil changes and lubrications.

Report Organization

This report is organized in three chapters. The second chapter provides background on numbers and types of vehicles of one ton or less owned or leased by state agencies and university units. Chapter III discusses our findings pertaining to state agency vehicle management systems.

Chapter II - Background

Introduction

This chapter provides a summary of the number and types of vehicles owned or leased by state agencies. It also provides information concerning the location of the majority of the state-owned vehicles. This information is included to provide a perspective as to the importance of the recommendation made in the following chapter.

Number of Vehicles and Type

The Legislative Audit Division sent a questionnaire to all state agencies and university units to determine the number and types of vehicles owned or leased by state agencies. Results of the questionnaire indicated 47 state entities own or lease 3,397 vehicles of one ton or less. Pickup trucks comprise the majority of vehicles owned by state agencies. Passenger vehicles totaled about 1,000. The value of these vehicles is estimated at $25 to $30 million. The following tables show the number of each vehicle type owned or leased by each entity.

Table 1

Number and Types of Vehicles Owned/Leased by Agencies
(1994)

Agency	Passenger Cars			Pickups, Blazers, Jeeps			Suburbans, Vans			Total
	Own	Lease	MPL	Own	Lease	MPL	Own	Lease	MPL	
Governor's Office			2							2
Secretary of State's Office	1	1								2
State Auditor		1								1
Office of Public Instruction	3						2			5
Judiciary (Supreme Court)	1	9								10
PSC	1			5						6
Adjutant General		2		2						4
Administration	1		1	1		3	1		4	11
State Fund	20									20
Agriculture	9			12			3			24
Commerce	22			31			4			57
Corrections	67		7	2		1	2			79
Center for the Aged	3			1			3			7
Eastmont Training Center	2			1			5			8
Montana Development Center	17		2	17			9			45
Montana State Prison	36		2	50			18			106
Montana State Hospital	18		1	26			9		1	55
Veteran's Home	2			2			1			5
Fish, Wildlife and Parks	23			377			14			414
Health and Environmental Sciences	6		7	4		4	3			24
Justice	333	2		14			13			362
Labor and Industry	28			7			2			37
Livestock		3		27	2					32
Natural Resources and Conservation	4		1	39			1			45
Revenue	38			96			6		1	141
School for the Deaf and Blind	1			2			4			7
SRS	31			2			2			35
Family Services	4		15				1			20
Pine Hills	7		2	5			1			15
Mountain View	4		2	4			1			11
State Lands	21			246			22			289
Transportation	170		7	534			141			852
Total	873	18	49	1,507	2	8	268	0	6	2,731

MPL = Leased from the Department of Transportation Motor Pool.

Source: Compiled by the Legislative Audit Division.

Table 2

Number and Types of Vehicles Owned/Leased by the University System
(1994)

University Systems	Passenger Cars			Pickups, Blazers, Jeeps			Suburbans, Vans			Total
	Own	Lease	MPL	Own	Lease	MPL	Own	Lease	MPL	
CHE			1							1
MSU - Billings College of Tech	1			1						2
MSU - Great Falls College of Tech	1			1						2
MSU - Northern	13			12			11			36
MSU - Billings	15	6*		14			1			36
MSU - Montana State University	43	10*		62	1*		58	2*		176
Fire Services Training School	2						3			5
Agricultural Experiment Station	9			100			29			138
Cooperative Extension Service	2	1*		7	3*		2			15
UofM - University of Montana	23	31*		73	21*		42	4*		194
UofM - Helena College of Tech	1			3			1			5
UofM - Western Montana College	6	1		1			4			12
UofM - Missoula College of Tech				3			3			6
UofM - Montana Tech	8			21			7			36
Division of Tech, MT Tech	1			1						2
Total	125	49	1	299	25	0	161	6	0	666

* Donated and/or obtained through federal or private grants.
MPL = Leased from the Department of Transportation Motor Pool.

Source: Compiled by the Legislative Audit Division.

The above tables do not include 61 motorcycles owned by five agencies. The Department of Fish, Wildlife and Parks owns 46 of the 61 motorcycles.

Location of Vehicles

Eighty-five percent of the state's vehicles are located in 13 Montana cities. The most vehicles are located in Missoula and Bozeman. Table 3 shows the number of state-owned vehicles located in 13 Montana cities.

Table 3

Number of Vehicles in Thirteen Cities (1994)

City	Number *
Missoula	413
Bozeman	390
Helena	309
Billings	280
Great Falls	227
Kalispell	219
Butte	154
Deer Lodge	116
Miles City	107
Havre	100
Glendive	65
Lewistown	58
Warm Springs	53
Total	2,491

*Excludes Highway Patrol, OPI Training, and DOT Motor Pool Vehicles

Source: Compiled by the Legislative Audit Division.

Chapter III - Optimal Vehicle Management

Introduction

We reviewed vehicle management practices at six state agencies and two university units to determine practices staff follow which appear effective. Industry criteria was also reviewed to determine the most effective means of managing vehicle fleets. We identified five basic components of an optimal Vehicle Management System: procurement, use and control, maintenance, disposal, and inventory. The elements comprising each of these areas include:

Procurement - needs assessments, replacement, and purchasing.

Use and control - definitions of legitimate vehicle use, data records for usage (dates, mileage, purpose), utilization of vehicles, and actual operating costs (fuel, oil, routine maintenance, and emergency repairs).

Maintenance - maintaining cumulative operational and repair cost records for each vehicle, and adherence to a preventive maintenance program.

Disposal - criteria to follow when disposing of vehicles.

Inventory - maintenance of data records for each vehicle by type, serial number, initial cost and location, and conducting, reconciling, and documenting an annual internal inventory of the vehicle fleet.

Varied Approach to Use and Care

Vehicle management practices in the agencies visited were measured against the above criteria. Audit work indicates the state has a varied approach to vehicle use and care based on decisions made by individual employees. Practices are so individually-based the state is not realizing any efficiency from combined policies or communication of "best practices." Many agencies do not have the basic components in place for an effective vehicle management system.

The following sections describe the presence and/or lack of policies and practices and examples of the effect on operations.

Procurement Procedures

When reviewing procurement we examined three areas: replacement policies, needs assessments which included determinations of need to increase or decrease the number of vehicles, and purchasing. Needs assessments included analyzing privately-owned vehicle reimbursement costs versus the cost of operating a state vehicle (either an agency-owned vehicle or leasing a Department of Transportation (DOT) Motor Pool vehicle), and leasing vehicles for short periods of time. One agency opted to purchase used cars rather than new vehicles.

Needs Assessment Practices

Basic criteria are necessary for making decisions on the need for vehicles. Fleet managers should determine their vehicle needs and the most cost-effective methods to achieve optimal fleet size. Routine vehicle needs assessment and operational break-even cost analysis are needed to:

1. Determine the most cost-effective method to meet the need for a vehicle.

2. Justify any additional or replacement vehicles.

Our audit work identified various levels of needs assessment. The following table shows which agencies conducted vehicle needs assessment.

Table 4

Vehicle Needs Assessment

Agency	Unit	Number of Vehicles	Needs Assessment
A	1	2	NO
	2	14	NO
B	1	25	NO
	2	8	SOME [1]
C	1	8	NO
	2	131	NO
	3	6	NO
D	1	32	NO
	2	5	NO
E	ALL	414	YES
F	1	22	NO
	2	17	NO
	3	193	NO
G	1	50	YES [2]
	2	71	YES [3]
H	1	28	YES
	2	50	YES [3]

[1] Reviewed buying vs personal car when received staff from another department.
[2] Did needs assessment and reduced fleet by 20 - not an ongoing occurrence.
[3] Do needs assessment when hire new people.

Source: Compiled by the Legislative Audit Division.

The following are specific examples of the assessment, or lack of assessment, we identified. As can be seen from the table, most agencies do not conduct any needs assessment.

-- One agency has a formal policy established to determine the need for a vehicle. A new vehicle request is considered with replacement vehicle requests. A formula is used to determine the number of points to assign to the new vehicle request. Factors in a new vehicle request include: if new FTE are involved, the estimated number of miles the vehicle will be driven, and estimated operating costs.

-- Staff in another agency do some needs assessment, but they were not taking into consideration all potential variables. One unit in this agency obtained some new cars at the end of fiscal year 1993-94. The cars were distributed according to the number of miles on cars currently in offices around the state and distances staff travel. Staff did not take into account personal car mileage expenses incurred in any of the offices.

POV

A review of personal car mileage expense in the agency's offices showed the two offices with the highest personal car mileage expense did not receive additional cars because existing cars did not meet the "high odometer" requirement. One office with low personal car mileage, and low state car usage in terms of miles per year, had a car with a high odometer reading so the office received an additional car. The two offices that did not receive additional cars had some of the agency's highest miles traveled per year.

-- One agency which did not conduct needs assessment appeared to purchase more vehicles even when others were not used. Audit work showed one or two vehicles, of a total of nine in one unit, were always available on any given day in fiscal year 1993-94. At the end of the fiscal year, the unit purchased three additional vehicles and did not intend to dispose of any vehicles.

-- In another agency, two offices outside of Helena were without one car each for over nine months due to repairs or because the car would not run. Although the cars were not available, the office supervisors indicated necessary work was completed.

These supervisors said they needed to replace the cars because staff had to use their personal vehicles. A review of expenditures in the offices showed the maximum travel by all staff in personal vehicles was 3,500 to 4,000 miles in any of the offices in fiscal year 1993-94. Some offices did not have any personal car mileage expense from July through November 1994. It appeared staff either used personal vehicles very infrequently, or staff did not charge for personal car mileage.

Options Are Available

When determining the need for a vehicle, agencies need to ascertain the most cost-effective method to meet the vehicle need. An option available to agencies other than purchasing is leasing vehicles for short times during peak vehicle usage or for specific trips. None of the agencies visited seemed to consider this option. Leasing vehicles for a short time or specific trips would be less expensive than purchasing vehicles which are used infrequently.

We compared the cost of renting or leasing a vehicle from a private vendor to using a Motor Pool vehicle (which could equate to using an agency-owned vehicle). We found the number of miles traveled and rental days are the determining factors as to whether it is cheaper to use a state vehicle or a rental vehicle.

Table 5 compares the cost of using a Motor Pool vehicle or renting a vehicle from a private vendor. We assumed rental vehicles would be mid-size, get 30 miles to a gallon, and a gallon of gas would cost $1.30. Gas is included in the state rental rate but has to be purchased with a rental vehicle. We used fiscal year 1994-95 Motor Pool rates since we obtained rental rates in February 1995.

Table 5

Cost of Renting a Vehicle Compared to Motor Pool Use

Destination from Helena	# of Days	Round Trip Miles	Miles in Town	FY 1995 Motor Pool Cost	Rental Company Cost* A	B	C	D	E
Missoula	1	240	15	$36	$40	$44	$51	$63	$44
	2	240	15	38	70	78	82	116	78
	3	240	15	40	99	111	127	168	111
	4	240	15	43	129	145	158	221	145
	5	240	15	45	159	134	189	274	179
Billings	1	458	20	68	50	54	61	73	54
	2	458	20	71	80	88	92	126	88
	3	458	20	73	109	121	137	178	121
	4	458	20	76	139	155	168	231	155
	5	458	20	79	169	144	200	284	189
Glendive	1	856	15	ROUND TRIP NOT FEASIBLE IN ONE DAY					
	2	856	15	126	96	104	109	142	104
	3	856	15	128	126	138	154	195	138
	4	856	15	130	156	172	185	248	172
	5	856	15	132	185	160	216	300	205

Least expensive mode of transportation.

*Includes the cost of gasoline.

Source: Compiled by the Legislative Audit Division.

For trips of longer duration it was always cheaper to use a Motor Pool vehicle than to rent a vehicle from a private vendor. For longer trips lasting fewer days renting a vehicle from some private vendors is cheaper than using a Motor Pool vehicle.

DOT is reviewing establishment of a term contract with a private rental agency to allow state employees to use a rental vehicle when a state vehicle is not available. Using this option could be less expensive to an agency than buying a vehicle depending on the agency's needs.

Conclusion

The need for a vehicle will depend upon the mission and operations of each program; however, decisions on how to meet that need should examine various factors. Policies could be formulated to address the use of "need factors" such as: daily usage, mileage, lease options, personal car usage, and cost-effectiveness in determining agency vehicle needs.

Replacement Practices

Agencies which already own vehicles need to consider vehicle replacement when they conduct their needs assessment. A fundamental question prior to replacing a vehicle is whether the vehicle is even needed to meet the program's mission and operations. It appears this question is not considered by some agencies when they contemplate replacing vehicles as can be seen in the following table.

Table 6

Vehicle Replacement Policies

Agency	Unit	Number of Vehicle	Replacement Policies
A	1	2	NO
	2	14	NO
B	1	25	NO
	2	8	NO
C	1	8	NO
	2	131	NO
	3	6	NO
D	1	32	NO
	2	5	NO
E	ALL	414	YES
F	1	22	YES
	2	17	NO
	3	193	NO
G	1	50	YES
	2	71	NO
H	1	28	YES
	2	50	NO

Source: Compiled by the Legislative Audit Division.

Three of the four agencies which have replacement policies base replacement on miles driven. The fourth agency bases replacement on: usage, current miles, condition, operating costs, and priority. This agency uses a point system for each factor to help determine priorities. A committee makes the final decision as to which vehicles will be replaced each year. The remaining four agencies do not have replacement policies; vehicles are replaced when money is available.

Once the need for the vehicle is determined through a needs assessment, replacement policies or guidelines can help staff manage vehicles and prevent the state from paying for unnecessary repairs or maintenance. Without specific guidelines, replacement

decisions are left entirely to individual preferences. Some problems identified during the audit which were probably caused due to lack of formal policies or guidelines include:

-- Repairing vehicles prior to sending them to Surplus Property Bureau, Department of Administration (DofA). For example, a vehicle in one agency was repaired at the cost of $316.45 in January 1994. The vehicle was not driven in February and only driven 54 miles in March. The vehicle was then identified for replacement. Formal replacement policies could have possibly identified the vehicle was due for replacement and the $316.45 would not have been spent.

-- In another agency a vehicle was moved from one unit to another after the first unit incurred $700 in repair costs. The receiving unit found the vehicle needed more repairs and did not meet the unit's needs. The vehicle was subsequently sent to Surplus Property Bureau.

Vehicle management policies discussing replacement, as identified by private and other state fleet managers, would establish criteria on which to base vehicle replacement decisions. Criteria include such things as the number of miles on the vehicle, the condition of the vehicle, the number of years it has been in service, and/or a percentage of operating and maintenance costs to the vehicle's original cost.

Purchasing

Vehicle management guidelines for purchasing vehicles would include an evaluation of alternatives to purchasing new vehicles. Cost-benefit analysis of alternatives (new versus used vehicles, purchasing versus leasing) is an option used by few agencies.

-- Seven of the state agencies visited purchase vehicles through DofA during the biennial purchase process for new vehicles.

-- One agency purchases vehicles from the federal General Services Administration's twice yearly auctions of used vehicles. The agency found it can obtain vehicles in good shape for reasonable prices.

-- One unit in one agency conducts lease versus purchase analyses. Staff in the unit compared the cost of leasing from Motor Pool to the cost of a new vehicle.

Many agencies purchase new vehicles when possibly a used or leased vehicle could meet the agency's needs. Some agencies indicated they do not have money to purchase new vehicles so they use current vehicles for longer than might be cost beneficial. Used or leased vehicles might solve this problem.

Conclusion: Procurement Policies Needed

Procurement is one of the basic components of a vehicle management system. Prior to obtaining a vehicle the agency should do a needs assessment to determine if a vehicle is actually necessary to meet a program's mission and operations, or if needs can be met by occasionally leasing or renting a vehicle. Agencies already owning vehicles need to determine if vehicles should be replaced (conduct a needs assessment) and, if so, when. If a vehicle is needed the agency must determine the most cost effective method of obtaining the vehicle. This might be by purchasing new or used vehicles, or leasing vehicles. Vehicle management policies or guidelines would help vehicle managers make these decisions.

Use and Control

Vehicle use and control should be consistent with the organization's mission and operational needs of units within the organization. Use practices can affect the agency's programs effectiveness and efficiency of operations. Our review of use and control included who can use state vehicles and for what purpose, data records for usage, and vehicle utilization.

Who Can Use the Vehicles and for What Purpose?

As shown in table 7, two agencies and specific units in three others have written policies concerning who can use vehicles and the purpose of the use. The remaining agencies have informal policies or indicated DOT Motor Pool policies are followed.

Table 7

Vehicle Use Policies

Agency	Unit	Number of Vehicles	Policies for Who Can Use	Policies for Use
A	1	2	YES [1]	YES
	2	14	YES [1]	YES
B	1	25	NO	YES
	2	8	NO	YES
C	1	8	NO	YES
	2	131	YES	YES [1]
	3	6	YES [1]	YES [1]
D	1	32	YES [2]	YES [2]
	2	5	YES [2]	YES [2]
E	ALL	414	YES	YES
F	1	22	YES	YES
	2	17	YES	YES
	3	193	YES	YES
G	1	50	YES	YES
	2	71	YES [1]	YES [1]
H	1	28	YES	YES
	2	50	YES [1]	YES [1]

[1]Informal policies only.
[2]Follow Department of Transportation Motor Pool Regulations.

Source: Compiled by the Legislative Audit Division.

All policies indicated vehicles could only be used for official business. Other examples of use and purpose policies included:

-- Unless authorized, state vehicles will not be driven between home and an established office or station.

-- State vehicles may be driven home at night by those who plan to start a trip before 8:00 a.m. the next day or who return from a trip after 5:00 p.m.

-- Recreational hunting and fishing while using a state vehicle is not allowed, even though an employee is on his/her own time.

-- No pets are allowed in the passenger compartment of any department vehicle.

-- Non-employees may ride in department vehicles only while such individuals are on official department business, while they are traveling to or from an official department function in which they are participants, while being helped or assisted by a department employee, or after prior approval on a case-by-case basis.

Unclear or unwritten policies can also result in inefficient use of resources. For example, in one agency without any policies staff in one office located outside of Helena were not sure who was authorized to use office vehicles. As a result of unclear policies, in fiscal year 1993-94 personal car mileage expenses were 51 percent of the office's total travel expenditures. If all office staff were allowed to use available agency vehicles, some of the expenditures for personal car mileage would have been unnecessary.

Written policies provide employees with an understanding of who can use state-owned vehicles and for what purpose. Policies also help ensure resources are used properly, efficiently, and economically.

Data Records for Vehicle Usage

In order to manage vehicles in an effective manner, information on usage is necessary. Usage information can be used to control the size of the fleet and determine the need for replacement, purchase or disposal. To obtain usage information, data records showing actual use are necessary. For most agencies daily records would be the most beneficial way to obtain actual usage. Daily records for vehicles such as highway patrol cars would not prove to be efficient since each vehicle is assigned to a person who has a specific area to patrol. The following table summarizes our review of data records at the agencies we visited.

Table 8

Vehicle Daily Use Records

Agency	Unit	Number of Vehicles	Have Daily Use Records
A	1	2	SOME [1]
	2	14	NO
B	1	25	YES
	2	8	YES
C	1	8	SOME [1]
	2	131	YES
	3	6	YES
D	1	32	YES
	2	5	NO
E	ALL	414	YES
F	1	22	NO
	2	17	NO
	3	193	NO
G	1	50	SOME [1]
	2	71	NO
H	1	28	SOME [1]
	2	50	NO

[1]Does not require recording each day of use.

Source: Compiled by the Legislative Audit Division.

Two state agencies and units in two other agencies complete records for each day of vehicle use. Four units in four state agencies require usage records but not for each day of use. The various forms require basically the same information: destination, beginning and ending odometer readings, miles driven, cost and quantity of any gas and/or oil purchases, and the driver's signature or initials.

Two agencies use daily usage information to obtain an operating cost per mile for each vehicle. This figure is used to determine if a vehicle should be replaced. One of the agencies also used the

information to obtain a more equitable distribution of vehicles among regional offices. The remaining agencies requiring daily usage records did not use the information to manage the agency's fleet; the information was just collected.

Vehicle management guidelines would indicate the type of data that should be collected and how it can be used to make vehicle need/use decisions. Additional information would include totals of: miles driven, gas used and cost, quarts of oil used and cost, and mechanical repair costs.

Vehicle Utilization Review

Data collected from usage records can provide management with the needed information to determine vehicle utilization. Without knowing actual utilization of vehicles, agency managers cannot determine if vehicles are used efficiently.

Only one state agency visited conducted formal vehicle use studies for specific staff in select units. The recent study consisted of reviewing miles each vehicle is driven in a year. None of the other agencies visited do any sort of utilization analysis.

The practice of reviewing vehicle utilization should be conducted on a regular basis to determine if vehicles are used efficiently and effectively. By not using vehicles efficiently or having too many vehicles, unnecessary expenses are incurred. The following is an example of utilization review.

-- In one agency there was under-utilization of the vehicle fleet. In three fiscal years all of the available vehicles were never used on the same day. For example, in fiscal year 1993-94, two vehicles were always available but never used, i.e. two vehicles were always sitting in the parking lot. In that same year there was only one day the entire year when seven of the nine available vehicles were in use. The following table shows for three fiscal years the number of vehicles available, the number of days the vehicles were used, and the number of days vehicles were available for use.

Table 9

Vehicle Utilization for Sample Agency
(Fiscal Years 1992-93 through 1993-94)

Number of Vehicles Being Used	Days Used in FY 1991-92	Days Used in FY 1992-93	Days Used in FY 1993-94
1	94	86	79
2	83	70	83
3	26	46	49
4	10	14	31
5	1	5	13
6	0	0	3
7		0	1
8			0
9			0
Number of Vehicles Available	3 to 6	5 to 7	6 to 9

Number of Vehicle Days in Use	383	445	606
Number of Available Vehicle Days	1,132	1,467	2,056

Source: Compiled by the Legislative Audit Division from agency records.

-- In another agency, unit policies indicated vehicles were estimated to be used 20,000 to 25,000 miles a year, yet two vehicles in one unit averaged less than 6,000 miles a year. One vehicle could possibly be used instead of the current two. Since daily usage records were not available for the vehicles we could not determine actual vehicle utilization.

Conclusion: Use and Control Guidelines Needed

Use and control guidelines help ensure only authorized employees use the vehicles and use is proper. Confusion as to who can use vehicles can lead to employees using their own vehicles when state-owned vehicles are available. Without usage records, organizations cannot determine operating costs per mile for each vehicle or actual utilization. Without knowing actual utilization of vehicles, agency managers cannot determine if vehicles are used efficiently.

Maintenance

A preventive maintenance program and tracking maintenance costs help an organization prolong the life of an asset and minimize state expenditures. Our review of maintenance included an examination of available operating, maintenance and repair cost records for each vehicle, preventive maintenance programs, and vehicle maintenance program management. The following chart summarizes agency use of maintenance programs and tracking costs.

Table 10

Tracking Vehicle Costs and Preventive Maintenance

Agency	Unit	Number of Vehicles	Track Operating Costs	Track Maintenance Costs	Formal Preventive Maintenance Program
A	1	2	NO	NO	NO
	2	14	NO	NO	NO
B	1	25	NO	NO	NO
	2	8	NO	NO	NO
C	1	8	NO	NO	NO
	2	131	YES	YES	NO
	3	6	NO	NO	NO
D	1	32	NO	NO	NO
	2	5	NO	NO	NO
E	ALL	414	YES	YES	SOME [3]
F	1	22	SOME [1]	SOME [1]	YES
	2	17	NO	NO	NO
	3	193	NO	NO	NO
G	1	50	YES [2]	YES [2]	YES
	2	71	YES [2]	YES [2]	YES
H	1	28	YES [2]	YES [2]	YES
	2	50	YES [2]	YES [2]	YES [4]

[1]Two units track costs on computer.
[2]Track costs for each vehicle serviced in-house.
[3]Have policy but not always followed - trying to get computer system to flag when due.
[4]Have formal programs but they are not followed.

Source: Compiled by the Legislative Audit Division.

Operating, Maintenance, and Repair Cost Records

Vehicle management policies should include tracking operating and maintenance costs to determine the cost to operate each vehicle and to provide information for replacement/disposal decisions. Operating costs include the cost of consumable products used in normal vehicle operation - gas, oil that is added between oil changes, tires and tubes, windshield wiper fluid, etc. Maintenance

costs include activities to maintain the vehicle in the best running condition and prevent future repairs. Maintenance can be scheduled (oil changes, batteries, replacing brake, transmission, steering fluids, and replacing boots) and non-scheduled (replacing an engine, U-joints, etc.). Repairs include such things as unexpected costs due to vandalism and traffic accidents.

Five agencies track operating costs to some extent. Two of the five agencies track operating costs for vehicles which are serviced in-house. One state agency visited tracks operating, maintenance, and repair costs. Two other agencies have specific units tracking costs.

Most systems used to track costs are computerized and illustrate the "individual basis" of the vehicle management systems. One resides on the state's mainframe computer. One is on the agency's mainframe, and two were developed by individuals on personal computers and shared with other staff in the respective agencies. Information input to the systems includes gas, oil and other fluid costs and amount, and date, type and cost of maintenance or repair work completed. Every agency with a system considers some of the information when making decisions pertaining to vehicle replacement.

Preventive Maintenance Program

Preventive maintenance is the systematic care, servicing, and inspection of vehicles to detect and correct minor deficiencies before they become major repairs. The objective of preventive maintenance is to reduce downtime, reduce repair costs, provide safe, reliable vehicles, and perform preventive maintenance in a consistent manner in accordance with established schedules.

Establishing a preventive maintenance program would ensure the life of the vehicle is not shortened needlessly. Industry information indicates optimum maintenance schedules for vehicles should be established based on the manufacture's specifications, car's age, mileage, and time since the last servicing. These policies should then be disseminated to employees caring for the vehicles.

The following are examples of the preventive maintenance programs we identified:

-- Three state agencies indicated units in the agency have preventive maintenance programs. In one agency only one unit had policies and those were followed. In another agency only one unit followed the policies. The other unit had a policy to change oil every six months but the majority of vehicles sampled had oil changes every eight to twelve months.

-- Policies differ between agencies; some require oil changes every 3,000 to 3,500 miles and others follow manufacturer's specifications.

-- In most cases policy is based on number of miles traveled, not time between changes. A review of documentation showed some vehicles had not had the oil changed for a number of years because miles traveled was less than required by policy.

-- In one agency with offices in numerous towns, four management personnel in four different towns all use different policies. One person follows recommended changes in the owner's manual, one wants oil changes every 3,000 miles or three months, another is 2,500 to 3,000 miles, and the fourth is 3,000 to 5,000 miles.

Inadequate vehicle maintenance increases both operating costs and long-term maintenance and repair. Too frequent maintenance causes excessive costs to the state.

Managing Vehicle Maintenance Programs

Responsibility for vehicle maintenance should be assigned to ensure maintenance is done at the appropriate times. Responsibility for a preventive maintenance program should be delegated to either the individual vehicle operator or to a centralized manager.

All state agencies contacted followed this practice. Specific people are responsible for vehicles. Some agencies have one person in an office responsible for the vehicles in the town or office, and other agencies have the person driving the vehicle responsible for maintenance.

Conclusion: Maintenance Guidelines Needed

Proper vehicle maintenance helps ensure a vehicle will last longer and be more economical to operate. Assigning vehicle maintenance to a specific person provides more assurance maintenance is completed. To ensure maintenance is adequate, guidelines should be established specifying when maintenance is to be conducted. Tracking maintenance costs provides agency management with the necessary information to determine the optimum time to replace vehicles.

Disposal

Vehicle management systems include vehicle disposal policies. Disposal criteria include the number of miles driven, the age of the vehicle, the condition of the vehicle, and a minimum repair cost as a percentage of the original purchase price. One state agency visited has formal disposal policies. Miles and condition are the determining factors. All agencies reviewed indicated vehicles are sent to Surplus Property Bureau, DofA, for disposal.

Lack of a formal vehicle disposal method contributes to growth of an agency's vehicle fleet, thereby increasing overall fleet costs. If vehicles are not disposed of at the appropriate time, the agency might operate them beyond the point of maximum useful operating life for the program using the vehicles, thus incurring unnecessary maintenance and operational costs. For example:

-- In one agency a vehicle was used 38 days in three years, and not used at all for the last six months in fiscal year 1993-94. The agency had not disposed of the vehicle even though there was a much newer one that was in use almost every month in three years. We were informed the old vehicle needed a new transmission and the battery was dead, but the vehicle was retained in case a back-up was needed. The department paid approximately $180 for insurance for the vehicle in fiscal year 1993-94.

-- In another agency, one office had two vehicles which were used for trips around town. One vehicle was used 10 days in 11 months and traveled 210 miles. If a personal car was used to travel those 210 miles, it would have cost the department $58.80. The department paid $158.87 per vehicle for passenger vehicle insurance that year. The other vehicle was used 47 days in 11 months and traveled 4,017 miles.

Inventory

Basic to an optimal vehicle management system is complete up-to-date vehicle inventories. Without a complete up-to-date inventory an agency cannot know what vehicles it owns or leases. The inventory should include maintenance of data records for each vehicle by type, serial number, initial cost and location, and conducting, reconciling, and documenting a regularly scheduled internal vehicle fleet inventory.

Table 11 shows five state agencies visited maintained complete, up-to-date vehicle inventories. Two other agencies had inventories in specific units. The inventories were maintained on computers; either personal computers or on the state's mainframe.

Table 11

Agency Inventories

Agency	Unit	Number of Vehicles	Complete and Accurate Inventory Records
A	1	2	NO
	2	14	NO
B	1	25	YES
	2	8	YES
C	1	8	YES
	2	131	YES
	3	6	YES
D	1	32	YES [1]
	2	5	YES
E	ALL	414	YES
F	1	22	YES
	2	17	YES
	3	193	NO
G	1	50	YES
	2	71	YES
H	1	28	YES
	2	50	YES

[1] The inventory from the unit was incorrect - Central Services uses PAMS.

Source: Compiled by the Legislative Audit Division.

One agency visited had an incomplete and inaccurate inventory listing. The following identifies the problems with the inventory:

-- The inventory did not include vehicle cost or the year purchased/leased.

-- A vehicle not on the November inventory was still in a regional office.

A master inventory should be maintained and updated monthly for additions, deletions, and changes. A complete and accurate inventory gives the state agency better control over vehicles. Also,

Risk Management and Tort Defense Division, DofA, requires a yearly inventory of each agency's vehicles to determine the vehicle rates for the state's self-insurance program. A complete up-to-date inventory would help ensure the information sent to DofA is accurate.

Conclusion - Agencies Can Work with Each Other to Share Best Practices

The state owns over 3,000 vehicles of one ton or less. During the audit, the number of vehicles increased in the eight agencies visited. The legislature received requests for more than 150 vehicles during the 1995 Legislative Session. A number of the requests were to replace worn out vehicles, but some were increases to current fleets. Overall, the state appears to be steadily increasing the size of its vehicle asset. This asset should be managed accordingly.

Our audit showed vehicle management practices over state-owned vehicles are individually-based. Each agency or even units within an agency are making decisions as to how state-owned vehicles should be managed. This individual-based vehicle management style has led to some inconsistencies and inefficiencies. For example:

-- Most agencies do not conduct formal needs analyses to determine if a vehicle is needed to meet the organization's mission or objectives.

-- Vehicles have been replaced shortly after money is spent repairing them.

-- New vehicles are purchased when a used vehicle or short-term lease could possibly meet the program's needs.

-- Personal vehicles are used in some agencies because there are no written policies as to who can use agency-owned vehicles and for what purpose.

-- Data records are not always maintained so vehicle usage cannot be determined.

-- Few utilization reviews are conducted to determine how much vehicles are used or if they are used efficiently.

-- Most agencies do not track operating, maintenance, and repair costs.

-- Preventive maintenance programs vary within agencies.

-- Vehicles are not disposed of when they are no longer operable and insurance is still paid on them.

In most of the agencies we visited the person overseeing the vehicles was not hired for that duty. Vehicle management became part of their duties. For example, one person was the purchasing agent and was assigned the oversight of vehicles a few years ago. In another agency a division administrator oversaw the vehicles. A "manual of best vehicle management practices" would help these and other agency staff determine the most appropriate methods to efficiently manage agency-owned vehicles.

According to the Administrative Rules of Montana, "the Department of Administration is primarily responsible for the general administration of state government . . . providing services in . . . purchasing, central stores, management system development. . . ." We believe DofA should work with other agencies to develop "best practices" for vehicle management. DofA could use the existing expertise at the Departments of Transportation and Fish, Wildlife and Parks to help formulate appropriate guidelines. These guidelines could then be distributed to vehicle/fleet managers in state agencies.

Recommendation #1

We recommend the Department of Administration work with state agencies to develop and distribute "best practices" for vehicle management.

Agency Response

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January 25, 1996

Scott A. Seacat
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Dear Mr. Seacat:

We have reviewed the following recommendation contained in the Vehicle Fleet Management Performance Audit Report dated February 1996:

> Recommendation #1. We recommend the Department of Administration work with state agencies to develop and distribute "best practices" for vehicle management.

We concur with this recommendation. The Department will convene a group of state agencies with large vehicle fleets to develop a manual outlining "best practices" for vehicle procurement, use and control, maintenance, disposal, and inventory. In addition, we will use this group to explore other issues such as a term contract for vehicle maintenance, travel policies and allowances, and vehicle procurement from General Services Administration auctions. We also will periodically convene the group to discuss common vehicle-related issues and to share experience and knowledge among agencies. For example, agencies with automated management systems could showcase those systems for interested agencies. We intend to begin implementing this action plan in early spring of this year.

We appreciate the opportunity to work with your staff on this issue.

Sincerely,

Lois Menzies

LOIS MENZIES
Director